NASA Briefs

Trafton announces plan to depart NASA

Wilbur Trafton, associate administrator for the Office of Space Flight at NASA Headquarters, has announced his intention to leave NASA, effective next month. NASA is proceeding with the search for a successor. Trafton has been the space agency's top official for human space flight since March 1996. During his tenure, the space shuttle has safely and successfully flown 13 missions, and the International Space Station program has moved from planning to the production of almost a quarter-of-a-million pounds of flight hardware. "I have been enormously privileged to lead this terrific team of talented people who make up the wide range of programs represented by the Office of Space Flight," said Trafton, who came to NASA as director of the space station program in January 1994.

Galileo finds Io dark spot size of Arizona

Observations taken by NASA's Galileo spacecraft five months apart reveal a new dark spot the size of Arizona on Jupiter's moon Io, indicating that dramatic volcanic activity occurred during that time. The visible change took place during the five months between Galileo's seventh and tenth orbits of Jupiter and covers about 249 miles, surrounding a volcanic center named Pillan Patera. Dark features at the center of the deposits may be new lava flows. In June 1997, an active plume was observed over Pillan by Galileo and the Hubble Space Telescope with a height of 75 miles, and both Galileo and ground-based astronomers observed an intense hot spot.

Plant growth lighting may help treat cancer

Special lighting technology developed for NASA's commercial plant growth experiments in space may help treat cancerous brain tumors in children. A technique called photodynamic therapy is using tiny pinhead-sized Light Emitting Diodes to activate light-sensitive, tumor-treating drugs. Experiments indicate the treatment can be more effective in destroying tumors than conventional surgery. Dr. Harry Whelan of the Medical College of Milwaukee, Wis., has obtained Food and Drug Administration approval to use the drug, called Photofrin II, on children's brain tumors on a trial basis. Once activated by the light, it destroys the tumor's cells, leaving normal brain tissues virtually untouched.

Latest JSC forms now available on-line

"I need a JSC form now!" someone exclaims. And then there's, "Those Forms in that file cabinet are obsolete. Where can I get a current version, fast?"

The answer is literally at your finger tips. According to Aubra Boyd, forms manager in the Information Systems Directorate, the most commonly used JSC forms are available via the Internet.

"Here's how it's done," Boyd explained, "from the JSC internal home page, click on 'JSC On-line Forms,' then click on the first line 'Search and retrieve a form….'"

For those who want to type in the address and go directly to the page the address is: http://www.jsc.nasa.gov/infosys/forms/.

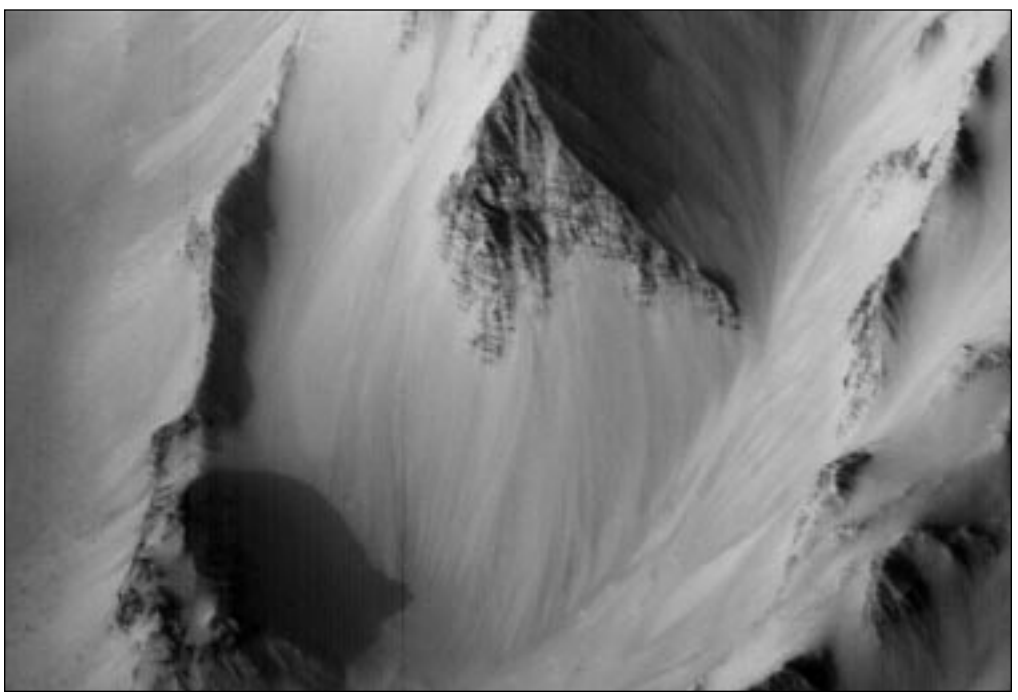
The web site provides on-line access to current versions of electronic forms, information on all active forms, general information about the JSC Forms Management Program and more.

ISD is working to make even more forms available in Microsoft Word. Several forms are available only in Delrina FormFlow version 1 (recognizable by the .frp file extension). To use these forms, remember that FormFlow version 1 is required on your PC. To request a copy of the software, contact your ISD Customer Service Agent, call the Help Desk at x34800 or send them an e-mail. Some computer systems such as Travel Manager Plus have forms embedded as part of the application or tool. The forms are completed and routed electronically and require the specific software for the application to be used. More such systems/forms will be available in the future.

Now is a great time to check what's available to you online. See what is available, then clean out those cabinets filled with obsolete forms. Don't replace the paper copies. If you make copies that you don't need then please recycle the paper. No carbon paper or NCR paper can be recycled.

"Isn't it better not to waste the paper and time in the first place?" Boyd asked. "Especially when the current version of the form is what you get at the push of a few buttons? Hard copy forms maintenance is time consuming and now just plain wasteful since we do that for you online!"

For more information about the JSC Forms Management Program or to request a new or revised form send your email to aubra.boyd1@jsc.nasa.gov or call Boyd at x36285.



NASA Photo

This Mars Global Surveyor image of the western portion of Valles Marineris shows the steep slopes of a canyon. The discovery of light and dark layers in the rock outcrops of the canyon walls indicate some 80 layers alternating in brightness and varying in thickness from 16 to 160 feet. This type of bedrock layering has never been seen before in Valles Marineris. It calls into question common views about the upper crust of Mars, for example, that there is a deep layer of rubble underlying most of the martian surface, and argues for a much more complex early history for the planet.

Mars Global Surveyor resumes aerobraking at more gradual pace

After a two-week hiatus, NASA's Mars Global Surveyor flight team resumed lowering the spacecraft's orbit around Mars on Nov. 7, this time at a more gradual pace.

The slower schedule will extend the mission's aerobraking phase by several months, and will change Global Surveyor's final science mapping orbit.

The decision to resume aerobraking came after intensive engineering analysis, computer simulations and tests with representative hardware to characterize the current condition of one of the spacecraft's two solar panels, which began to flex more than expected during the spacecraft's lowest dip into the Martian atmosphere on Oct. 6.

Under normal circumstances, the spacecraft's two 11-foot-long solar panels should remain fixed and nearly motionless during each aerobraking pass through the upper atmosphere of Mars. One of the panels, which did not fully deploy and latch after launch, moved past its latched position and has shown slight movement during the spacecraft's last three closest approaches.

"After sufficient time to study the observed motion, we concluded that it is possible to perform additional aerobraking at a slower rate, without putting undue stress on the solar panel in question," said Glenn Cunningham, Mars Global Surveyor mission manager at NASA's Jet Propulsion Laboratory. "This changes Mars Global Surveyor's final mapping orbit, but it should not have a significant impact on the ability of Global Surveyor to accomplish the mission science objectives."

The spacecraft's scientific instruments have performed flawlessly and continue to return new information about Martian magnetic properties, its atmosphere, surface features, temperatures and mineralogy since Mars Global Surveyor entered orbit on Sept. 11.

The spacecraft is in a 35-hour elliptical orbit that brings it 107 miles above the surface of Mars at its closest approach. The operations team at JPL and Lockheed Martin Astronautics, Denver, are reducing that orbit using a more moderate level of aerobraking that will slowly bring the spacecraft into the desired nearly circular mapping orbit.

Mechanical stress analysis tests suggest that the yoke that connects the solar panel to the spacecraft—a triangular, aluminum honeycomb material sandwiched between two sheets of graphite epoxy—probably fractured on one surface.

Mars Pathfinder winds down after string of successes

After operating on the surface of Mars three times longer than expected and returning a tremendous amount of new information, NASA's Mars Pathfinder mission is winding down.

Flight operators at NASA's Jet Propulsion Laboratory made the announcement Nov. 4 after attempting to reestablish communication with the spacecraft over the last month. With depletion of the spacecraft's main battery and no success in contacting Mars Pathfinder via its main or secondary transmitters, the flight team cannot command the spacecraft or the small Sojourner that had been roving about the landing site and studying rocks.

"We concede that the likelihood of hearing from the spacecraft again diminishes with each day," said Pathfinder Project Manager Brian Muirhead. "We will scale back our efforts to reestablish contact but not give up entirely. "Given that, and the fact that Pathfinder is the first of several missions to Mars, we'll say 'see you later' instead of saying goodbye."

At the time the last telemetry was received, Pathfinder's lander had operated nearly three times its design lifetime of 30 days, and the Sojourner rover operated 12 times its design lifetime of seven days.

"I want to thank the many talented men and women at NASA for making the mission such a phenomenal success. It embodies the spirit of NASA, and serves as a model for future missions that are faster, better, and cheaper. Today, NASA's Pathfinder team should take a bow, because America is giving them a standing ovation for a stellar performance," said NASA Administrator Daniel S. Goldin.

Since its landing on July 4, Mars Pathfinder has returned 2.6 billion bits of information, including more than 16,000 images from the lander and 550 images from the rover, as well as more than 15 chemical analyses of rocks and extensive data on winds and other weather factors. The only remaining objective was to complete the high-resolution 360-degree image of the landing site called the "Super Pan," of which 83 percent has already been received and is being processed. The last successful data transmission cycle from Pathfinder was completed at 3:23 a.m. PDT Sept. 27.

"This mission has advanced our knowledge of Mars tremendously and will surely be a beacon of success for upcoming missions to the red planet," added Dr. David Baltimore, president of the California Institute of Technology, which manages JPL for NASA. "Done quickly and within a very limited budget, Pathfinder sets a standard for 21st century space exploration."

The Mars Pathfinder team first began having communication problems Sept. 27. Repeated attempts to reestablish contact were unsuccessful.

"Basically we are shifting to a contingency strategy of sending commands to the lander only periodically, perhaps once a week or once per month," said Mission Manager Richard Cook. "Normal mission operations are over, but there is still a small chance of reestablishing a link, so we'll keep trying at a very low level."

JSC dedicates Educator Resource Center at Space Center Houston

JSC and Space Center Houston officials dedicated a new Educator Resource Center on Nov. 7. The new center will provide teachers easier access to tools they can use to expand and enhance the scientific and technological competence of their students.

JSC and Space Center Houston merged their unique capabilities to form a partnership for the move of JSC's Educator Resource Center outside the center gates. The ERC is part of NASA's comprehensive education program to contribute to the national educational goals.

While JSC provides equipment and materials for the ERC, the visitor center now operates the facility and provides a unique environment and resources. The move makes it easier for teachers to visit and use.

The ERC offers NASA educational materials featuring activity guides focusing on math, science and technology. Educators may access NASA's on-line resources for educators via the Internet-capable computers. Certified teachers are available for consultation. The ERC's professional staff can facilitate training to help educators get the most out of NASA's curriculum guides.

The ERC is open to educators of all grade levels. Regular operating hours are weekdays from 8:30 a.m.-5:30 p.m. with weekend appointments available. An educator may reserve a weekday or weekend appointment by calling 281-244-2129. The ERC is located inside Space Center Houston. Educators may enter through the door behind the flight deck of the shuttle mockup.

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Editor . . . . . .Kelly Humphries

Health Benefits Fair heralds open season for benefits, thrift savings

The annual open seasons for the Federal Employees Health Benefits Program and Thrift Savings Program are under way, and the annual Health Benefits Fair is scheduled for Wednesday, Dec. 3.

From 9 a.m.-3 p.m. in the lobby of Bldg. 2, representatives from more than 25 health care providers will discuss their plans and offerings. Employees, retirees, and spouses are invited.

The Health Benefits Open Enrollment Season, which runs through Dec. 8, is a four-week period during which employees may change from one health plan to another; change between "self only" and "family" enrollment or enroll in a health plan even if they previously declined.

Employees may make a change or enroll by either submitting an SF 2809, Health Benefits Registration Form, to AH6/Employee Services. Open Season changes, enrollments and plan coverage will be effective Jan. 4, 1998.

Open season for the Thrift Savings Plan will extend through Jan. 31. During this period, eligible employees may begin making contributions to the Thrift Savings Plan; change the amount of their contributions; change the allocation of their contributions among the investment funds, or stop their current contributions. The next TSP open season will begin May 15.

For more information, visit the Human Resources Office Homepage at http: http://hro.jsc.nasa.gov/, call x3268l or drop by Employee Services, Bldg. 45, Rm. 140.

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